

In re WESTBROOK ET AL., Application No. 09/777,095
Amendment B

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 (previously presented): A device for distributed reassembly of a plurality of subdivided packets comprising:

a plurality of distributed reassembly components, each of the plurality of distributed reassembly components including one or more data structures for maintaining an indication of the subdivided packets that are stored in other distributed reassembly components of the plurality of distributed reassembly components;

a communications mechanism coupled to the plurality of distributed reassembly components to allow communication among the distributed reassembly components; and

one or more packet merging mechanisms coupled to the plurality of distributed reassembly components and configured to receive subdivided packets from at least two of the plurality of distributed reassembly components and to produce a reassembled packet including said subdivided packets received from said at least two of the plurality of distributed reassembly components.

2 (previously presented): The device of claim 1, comprising a distributor for distributing said subdivided packets to the plurality of distributed reassembly components.

3 (previously presented): The device of claim 2, wherein the device includes a packet switch; and wherein the distributor includes a plurality of paths through the packet switch.

4 (previously presented): The device of claim 3, wherein at least two of the plurality of paths are on different planes of the packet switch.

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5 (previously presented): The device of claim 1, wherein the communications mechanism includes a communication ring or bus.

6 (previously presented): The device of claim 1, wherein the one or more packet merging mechanisms includes a packet merge bus.

7 (previously presented): A packet switching system including the device of claim 1.

8 (previously presented): A router including the device of claim 1.

9 (previously presented): The device of claim 1, wherein each of the plurality of distributed reassembly components includes a packet reassembler.

10 (previously presented): The device of claim 9, wherein each of the plurality of distributed reassembly components further includes a queue manager.

11 (previously presented): The device of claim 9, wherein each of the plurality of distributed reassembly components further includes a packet memory manager.

12 (previously presented): A device for reassembling a plurality of subdivided packets comprising:

a plurality of means for reassembling the plurality of subdivided packets, each of the plurality of means for reassembling the plurality of subdivided packets including a data structure means for indicating which packets of the plurality of subdivided packets are located in other of the plurality of means for reassembling the plurality of subdivided packets;

a communications means coupled to the plurality of means for reassembling the plurality of subdivided packets; and

a merging means for receiving packets from the plurality of means for reassembling the plurality of subdivided packets and for producing a reassembling stream of the plurality of subdivided packets.

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13 (previously presented): The device of claim 12, further comprising a packet switching means, coupled to the plurality of means for reassembling the plurality of subdivided packets, for distributing packets of the plurality of subdivided packets to the plurality of means for reassembling the plurality of subdivided packets.

14 (previously presented): The device of claim 12, wherein each of the means for reassembling the plurality of subdivided packets includes a local data structure means for maintaining an indication of the packets stored locally within a particular means for reassembling the plurality of subdivided packets.

15 (original): A method performed by a particular component of a plurality of components for reassembling a larger packet packetized into a plurality of subdivided packets, the method comprising:

receiving a first set of the plurality of subdivided packets, the first set including a first packet of the plurality of subdivided packets;

receiving an indication of a second set of the plurality of subdivided packets received by a second component of the plurality of components, the indication of the second set identifying at least a second packet of the plurality of subdivided packets; and

sending the first packet over a communications media in coordination with at least one other component of the plurality of components of which the second component is a member to generate the larger packet including the first and second subdivided packets.

16 (original): The method of claim 15, further comprising placing a reassembled packet indication in a queue, the reassembled packet indication including a representation of the first packet; and removing the reassembled packet indication from the queue.

17 (original): The method of claim 16, wherein the reassembled packet indication further includes a second representation of the second packet.

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18 (original): The method of claim 16, wherein the first packet is the first in the reassembly order of the smaller packets.

19 (original): The method of claim 15, wherein the first packet is not the first in the reassembly order of the smaller packets.

20 (original): The method of claim 15, further comprising receiving a transmit request from the second component, wherein sending the first packet is performed in response to receiving the transmit request.

21 (original): The method of claim 15, further comprising in response to recognizing the first packet is the first in the reassembly order of the smaller packets, sending a transmit request to at least the second component of the plurality of components.

22 (original): The method of claim 15, wherein the indication of the second set of packets is received over a communications ring or bus.

23 (original): The method of claim 15, wherein each of the packets of the plurality of subdivided packets is identified with a sequence identifier.

24 (original): The method of claim 23, wherein the sequence identifier is a sequence number or a timestamp value.

25 (cancelled)

26 (original): The method of claim 15, further comprising storing the first packet on a storage device or in a memory; and retrieving the first packet from the storage device or the memory.

27 (original): A packet switching system performing the method of claim 15.

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28 (original): A router performing the method of claim 15.

29 (original): A computer system performing the method of claim 15.

30 (new): The device of claim 1, wherein a first component of the plurality of distributed reassembly components is configured to perform operations, said operations including:

receiving a first set of said subdivided packets, the first set including a first packet of the plurality of subdivided packets;

receiving an indication of a second set of the plurality of subdivided packets received by a second component of the plurality of distributed reassembly components over the communications mechanism, the indication of the second set identifying at least a second packet of the plurality of subdivided packets; and

sending the first packet over a packet merging mechanism of said one or more packet merging mechanisms in coordination with at least the second component to generate the reassembled packet including the first and second subdivided packets.